

Although the embodiment of Fig. 5 depicts two separate treadmills, one for each footcar, it is possible to provide a configuration in which a single treadmill is provided extending across the width of the device. In situations where two treadmills are provided, it would be possible to configure the device such that the treadmills can move at different speeds (such as by driving each with a separate motor or providing reduction gearing for one or both treadmills), e.g., for rehabilitative exercise and the like.

In one embodiment, the inclination 542 can be changed automatically, e.g., by extending link arm 528 using a motor to drive a rack and pinion connection. Preferably, the motor is activated in response to manual user input or in response to a pre-programmed or pre-stored exercise routine such that the device can be elevated during exercise.

Although in the embodiment of Fig. 5 the speed of the belt movement was adjusted by adjusting the speed of the motor 53, it would also be possible to use a constant-speed motor 53 and employ, e.g., shiftable gears to change the belt speed. It is also possible to provide speed control which is configured to provide a constant speed, rather than a variable or adjustable speed.

Although it is recognized that there may be some amount of resistance to forward (or upward) leg movement arising from internal machine resistance and/or overcoming the effects of gravity, preferably the exercise device of the present invention can provide forward or upward leg movement resistance which is greater than internal machine resistance and/or gravity resistance and preferably is adjustable (which internal machine resistance and gravity resistance typically are not).

Although it is anticipated that users will typically perform leg exercise in an alternating, reciprocal fashion, preferably the exercise device does not force the user into this type of exercise. In the depicted embodiments, there is nothing in the machine that would prevent a user from moving one leg more vigorously than the other (or even keeping one leg stationary) although it might be necessary to adjust speed control to accommodate this type of exercise).

Although the invention has been described by way of a preferred embodiment and certain variations and modifications, other variations and modifications can also be used, the invention being defined by the following claims: